

KEYSTONE

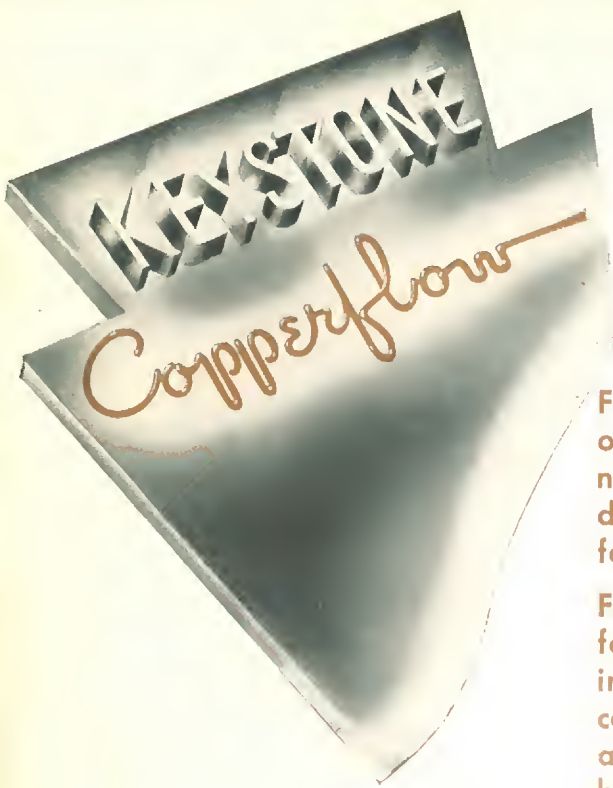
Copper & Brass



**CAST SOLDER
AND FLARED**

Fittings

KEYSTONE BRASS WORKS, ERIE, PA.



Founded in 1887, the Keystone Brass Works offers the experience and craftsmanship of nearly three-quarters of a century in foundry and finishing practices relating to non-ferrous metals.

For more than 20 years these specialized facilities have found their finest application in the design and production of Keystone's complete line of solder and flared fittings and valves for modern copper plumbing, heating and air conditioning installations.

Keystone Copperflow fittings are specified by architects, engineers, contractors and master plumbers - craftsmen who take an honest pride in their work. They are sold by selected wholesalers and distributors who have an equal pride in the quality of products they offer.



KEYSTONE BRASS WORKS • ERIE, PA.

CATALOG NO. 51

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TERMS AND CONDITIONS

FREIGHT: All shipments are f.o.b. shipping point with actual freight allowed on shipments weighing 150 pounds or more. When orders cover sufficient material to weigh 150 pounds or more, back order shipments, where necessary, will be made on a freight allowed basis. We reserve the right to route shipments the cheapest way where freight is allowed. **RETURNED GOODS:** No material should be returned without our permission. For material returned with our permission and received by us in a saleable condition, credit will be allowed, less 10% handling charge and all freight charges incurred by seller. **TERMS OF PAYMENT:** We will allow 2% cash discount on the 25th of the month on invoices dated the 1st through the 15th of that month; on the 10th of the following

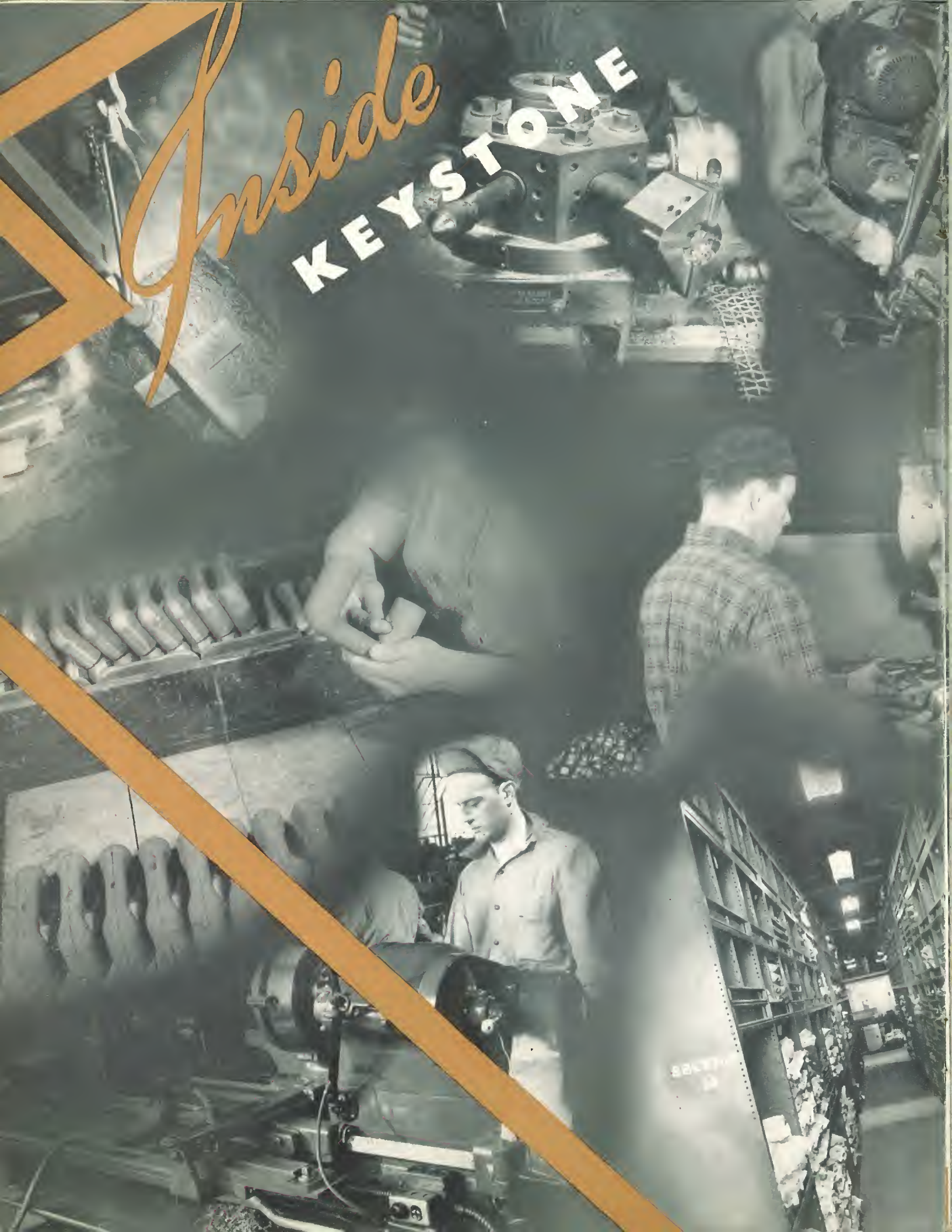
month on invoices dated the 16th through the 31st. Otherwise net 30 days. **WARRANTY:** No claim for damage caused by defective material or for labor in replacing such defective material will be allowed. Our liability is limited to the replacement of any defective material or crediting the buyer's account with the cost of our material only. Fulfillment of all orders is contingent upon strikes, accidents and other delays unavoidable or beyond our control. **PRICES:** The prices shown in this catalog are LIST PRICES. See current DISCOUNT SHEET for discounts applying. List prices and discounts applying are subject to change at any time without notice. Prices are those in effect on date of shipment.

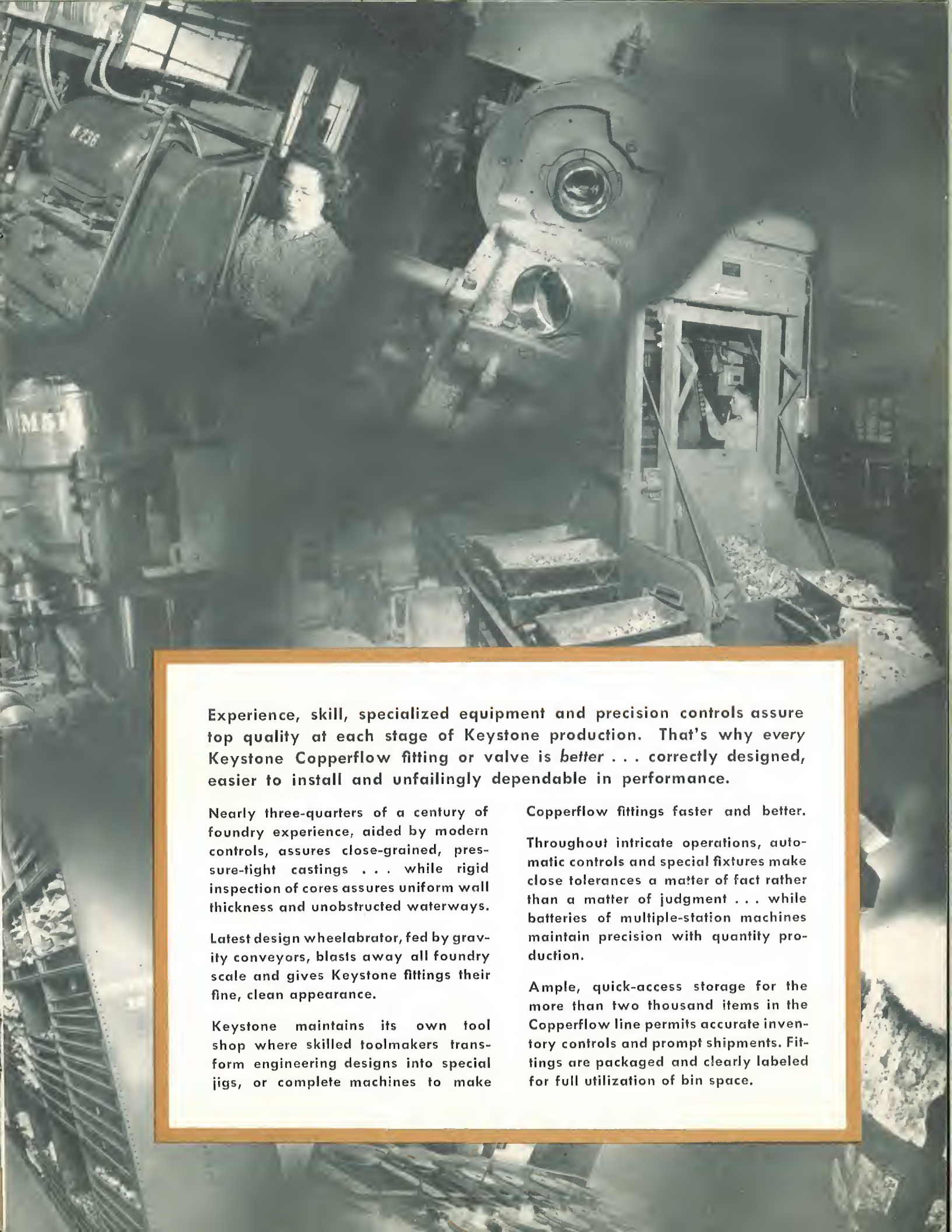
The placing of any order shall constitute the buyer's acceptance of the above terms and conditions.

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SPECIFY KEYSTONE *Copperflow* . . THE COMPLETE LINE

Inside KEYSTONE





Experience, skill, specialized equipment and precision controls assure top quality at each stage of Keystone production. That's why every Keystone Copperflow fitting or valve is *better* . . . correctly designed, easier to install and unfailingly dependable in performance.

Nearly three-quarters of a century of foundry experience, aided by modern controls, assures close-grained, pressure-tight castings . . . while rigid inspection of cores assures uniform wall thickness and unobstructed waterways.

Latest design wheelabrator, fed by gravity conveyors, blasts away all foundry scale and gives Keystone fittings their fine, clean appearance.

Keystone maintains its own tool shop where skilled toolmakers transform engineering designs into special jigs, or complete machines to make

Copperflow fittings faster and better.

Throughout intricate operations, automatic controls and special fixtures make close tolerances a matter of fact rather than a matter of judgment . . . while batteries of multiple-station machines maintain precision with quantity production.

Ample, quick-access storage for the more than two thousand items in the Copperflow line permits accurate inventory controls and prompt shipments. Fittings are packaged and clearly labeled for full utilization of bin space.



ALL SIZES LISTED ARE "NOMINAL"

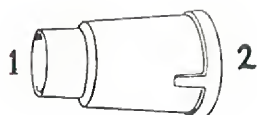
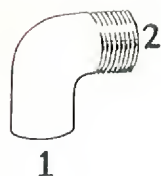
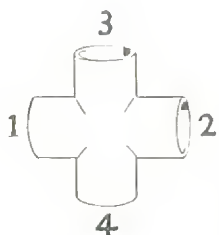
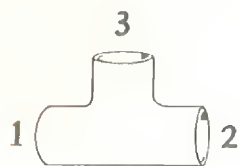
Keystone Copperflow Solder, Flared and Drainage Fittings are accurately machined to close tolerances for use with corresponding nominal sizes of type K, L or M copper tube.

The actual outside diameter of the tube as well as the bore of the fitting is always $\frac{1}{8}$ " larger than the nominal size. (The inside diameter of the tube

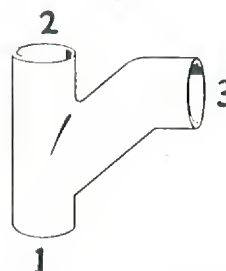
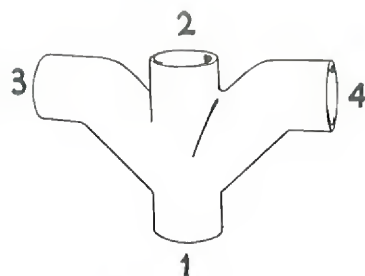
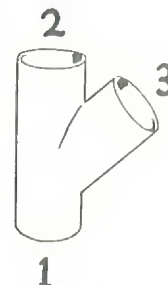
varies slightly according to the wall thickness established for types K, L or M tube.)

Because this designation is most widely understood, all sizes listed in this catalog are NOMINAL. For example, a 1" solder fitting will have an actual cup diameter of $1\frac{1}{8}$ ".

HOW TO "READ" FITTINGS



In accordance with standard trade practice, Keystone Copperflow fittings are listed and should be ordered by specifying the Copper End FIRST, the opposite end SECOND, and the branch or branches THIRD and FOURTH. (See illustrations.)



LIST PRICES

Prices shown on the catalog page illustrating each item, and in the convenient CONSOLIDATED PRICE LIST inside the back cover are LIST PRICES. Discounts, terms and conditions are shown on current discount sheets.

PACKAGING

Wherever practical all fittings are packaged in strong, multi-walled paper bags, clearly marked with contents. STANDARD PACKAGING IS IN MULTIPLES OF 25 PIECES.

All valves are boxed in convenient quantities, clearly marked for shelf stock.

ITEM DESCRIPTIONS

When ordering by wire or cable, the catalog number and size or sizes provide a full description of the fitting wanted. As a double check against misunderstanding, however, it is better in routine orders to give a complete though abbreviated description in addition to the number.

For example: " $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{1}{2}$ " — 501-TEE CCF.

ROUGHING-IN DIMENSIONS

Complete printed sets of roughing-in dimensions for all Keystone fittings and valves are available for architects, engineers, and contractors, upon request.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

SPECIFICATIONS

Engineers, architects and plumbing and heating contractors have become increasingly aware, throughout recent years, of the advantages of copper tube and fitting installations. Outstanding benefits include full and unobstructed waterways, resistance to corrosion or clogging, favorable thermal factors, plus easier, faster installation.

Tests conducted by the United States Bureau of Standards have proved that when solder joints are properly made with tube and fittings conforming to established standards . . . the joints are stronger than either the tube or the fitting.

Flared fitting connections have also proved stronger than threaded connections.

Keystone Copperflow Solder Fittings equal, or better, the specifications of American Standards

for Solder Joint Fittings A.S.A. B16.18-1950.

Solder Fittings listed are in accordance with the National Bureau of Standards Simplified Practice Recommendation No. R212-45.

Pipe Threads of all Copperflow Fittings conform to American Taper Pipe Threads Standards, N.P.T. A.S.A.B2.1.

Keystone Copperflow Flared Tube Fittings conform to American Standard Specifications A40.2 — 1936.

Keystone Copperflow Drainage Fittings are designed for maximum interior smoothness and unobstructed flow. All 90° fittings are made in a long sweep pattern with a pitch of 1/4" per foot. They conform to A.S.A. tentative standards now being developed by the industry.

DIMENSIONS OF COPPER WATER TUBE AND SOLDER FITTINGS

Nominal Sizes	COPPER WATER TUBE								SOLDER FITTINGS			
	Outside Dimensions		Wall Thickness			Pounds Per Ft.			Size of Bore		Depth of Bore	
	Min.	Max.	Type K	Type L	Type M	Type K	Type L	Type M	Min.	Max.	Min.	Max.
1/4"	.374	.376	.032	.030	.025	.133	.126	.106	.377	.379	.3125	.375
3/8"	.499	.501	.049	.035	.025	.269	.198	.144	.502	.504	.375	.4375
1/2"	.624	.626	.049	.040	.028	.344	.285	.203	.627	.629	.500	.5625
3/4"	.874	.876	.065	.045	.032	.641	.455	.328	.877	.879	.750	.8125
1"	1.1235	1.1265	.065	.050	.035	.839	.655	.464	1.128	1.130	.9375	1.00
1 1/4"	1.3735	1.3765	.065	.055	.042	1.04	.884	.681	1.378	1.380	1.00	1.0625
1 1/2"	1.623	1.627	.072	.060	.049	1.36	1.14	.940	1.6285	1.631	1.125	1.1875
2"	2.123	2.127	.083	.070	.058	2.06	1.75	1.46	2.1285	2.131	1.375	1.4375
2 1/2"	2.623	2.627	.095	.080	.065	2.92	2.48	2.03	2.6285	2.631	1.500	1.5625
3"	3.123	3.127	.109	.090	.072	4.00	3.33	2.68	3.1285	3.131	1.6875	1.750
4"	4.123	4.127	.134	.110	.095	6.51	5.38	4.66	4.1285	4.1315	2.1875	2.250

NOTE:—The Engineering staff of The Keystone Brass Works will welcome the opportunity to provide you with any further technical data you may need . . . or to suggest efficient applications for unusual installations. Consult your nearest Keystone jobber or write directly to — "Engineering Department, Keystone Brass Works, Erie, Pa."

Copperflow



500—TEE

Copper to Copper to Copper
1/4" to 4". Reducing sizes as listed.



501—TEE

Copper to Copper to Female S.P.S.
3/8" to 2". Reducing sizes as listed.



502—TEE

Copper to Female S.P.S. to Copper.
3/8" to 2". Reducing sizes as listed.

REDUCING SIZES FOR 500 • 501 • 502

500	1 x 1/2 x 1/2	1 1/4 x 3/4 x 3/4
1/4 x 1/4 x 3/8	1 x 1/2 x 3/4	1 1/4 x 3/4 x 1
3/8 x 1/4 x 1/4	1 x 1/2 x 1	1 1/4 x 3/4 x 1 1/4
3/8 x 1/4 x 3/8	1 x 3/4 x 1/2	1 1/4 x 1 x 1/2
3/8 x 3/8 x 1/4	1 x 3/4 x 3/4	1 1/4 x 1 x 3/4
3/8 x 3/8 x 1/2	1 x 3/4 x 1	1 1/4 x 1 x 1
1/2 x 3/8 x 3/8	1 x 1 x 3/8	1 1/4 x 1 x 1 1/4
1/2 x 3/8 x 1/2	1 x 1 x 1/2	1 1/4 x 1 1/4 x 1/2
1/2 x 1/2 x 3/8	1 x 1 x 3/4	1 1/4 x 1 1/4 x 3/4
1/2 x 1/2 x 3/4	1 x 1 x 1 1/4	1 1/4 x 1 1/4 x 1
3/4 x 1/2 x 3/8	1 x 1 x 1 1/2	1 1/4 x 1 1/4 x 1 1/2
3/4 x 1/2 x 1/2	1 1/4 x 1/2 x 1/2	1 1/2 x 1/2 x 1/2
3/4 x 1/2 x 3/4	1 1/4 x 1/2 x 3/4	1 1/2 x 1/2 x 1
3/4 x 3/4 x 3/8	1 1/4 x 1/2 x 1	1 1/2 x 1/2 x 1 1/4
3/4 x 3/4 x 1/2	1 1/4 x 1/2 x 1 1/4	1 1/2 x 1/2 x 1 1/2
3/4 x 3/4 x 1	1 1/4 x 3/4 x 1/2	



500—REDUCING TEE

1 1/2 x 3/4 x 3/4	2 x 3/4 x 2	2 1/2 x 1 1/4 x 1 1/4	3 x 3 x 1 1/2	1 x 3/4 x 1/2
1 1/2 x 3/4 x 1	2 x 1 x 1	2 1/2 x 1 1/4 x 2 1/2	3 x 3 x 2	1 x 3/4 x 3/4
1 1/2 x 3/4 x 1 1/4	2 x 1 x 1 1/2	2 1/2 x 1 1/2 x 1 1/4	3 x 3 x 2 1/2	1 x 3/4 x 1
1 1/2 x 3/4 x 1 1/2	2 x 1 x 2	2 1/2 x 1 1/2 x 1 1/2	3 x 3 x 4	1 x 1 x 3/8
1 1/2 x 1 x 1/2	2 x 1 1/4 x 1	2 1/2 x 1 1/2 x 2	4 x 1 x 4	1 x 1 x 1/2
1 1/2 x 1 x 3/4	2 x 1 1/4 x 1 1/4	2 1/2 x 1 1/2 x 2 1/2	4 x 1 1/4 x 4	1 x 1 x 3/4
1 1/2 x 1 x 1	2 x 1 1/4 x 1 1/2	2 1/2 x 2 x 1	4 x 1 1/2 x 4	1 1/4 x 1 1/4 x 3/8
1 1/2 x 1 x 1 1/4	2 x 1 1/4 x 2	2 1/2 x 2 x 1 1/4	4 x 2 x 2	1 1/4 x 1 1/4 x 1/2
1 1/2 x 1 x 1 1/2	2 x 1 1/2 x 1/2	2 1/2 x 2 x 1 1/2	4 x 2 x 3	1 1/4 x 1 1/4 x 3/4
1 1/2 x 1 1/4 x 1/2	2 x 1 1/2 x 3/4	2 1/2 x 2 x 2	4 x 2 x 4	1 1/4 x 1 1/4 x 1
1 1/2 x 1 1/4 x 3/4	2 x 1 1/2 x 1	2 1/2 x 2 x 2 1/2	4 x 3 x 2	1 1/2 x 1 1/2 x 1/2
1 1/2 x 1 1/4 x 1	2 x 1 1/2 x 1 1/4	2 1/2 x 2 1/2 x 1/2	4 x 3 x 3	1 1/2 x 1 1/2 x 3/4
1 1/2 x 1 1/4 x 1 1/4	2 x 1 1/2 x 1 1/2	2 1/2 x 2 1/2 x 3/4	4 x 3 x 4	1 1/2 x 1 1/2 x 1
1 1/2 x 1 1/4 x 1 1/2	2 x 1 1/2 x 2	2 1/2 x 2 1/2 x 1	4 x 4 x 3/4	2 x 2 x 1/2
1 1/2 x 1 1/2 x 1/2	2 x 2 x 1/2	2 1/2 x 2 1/2 x 1 1/4	4 x 4 x 1	2 x 2 x 3/4
1 1/2 x 1 1/2 x 3/4	2 x 2 x 3/4	2 1/2 x 2 1/2 x 1 1/2	4 x 4 x 1 1/4	2 x 2 x 1
1 1/2 x 1 1/2 x 1	2 x 2 x 1	2 1/2 x 2 1/2 x 2	4 x 4 x 1 1/2	2 x 2 x 1 1/4
1 1/2 x 1 1/2 x 1 1/4	2 x 2 x 1 1/4	3 x 1 x 3	4 x 4 x 2	2 x 2 x 1 1/2
1 1/2 x 1 1/2 x 2	2 x 2 x 1 1/2	3 x 1 1/4 x 3	4 x 4 x 2 1/2	
2 x 1/2 x 1 1/2	2 1/2 x 3/4 x 2 1/2	3 x 1 1/2 x 3	4 x 4 x 3	502
2 x 1/2 x 2	2 1/2 x 1 x 2 1/2	3 x 2 x 1 1/2		1/2 x 3/4 x 1/2
		3 x 2 x 2		3/4 x 1/2 x 1/2
		3 x 2 x 2 1/2		3/4 x 1/2 x 3/4
		3 x 2 x 3		3/4 x 3/4 x 1/2
		3 x 2 1/2 x 2		1 x 1/2 x 1
		3 x 2 1/2 x 2 1/2		1 x 3/4 x 1
		3 x 2 1/2 x 3		1 1/4 x 3/4 x 1
		3 x 3 x 1/2		1 1/2 x 3/4 x 1
		3 x 3 x 3/4		1 1/2 x 1 1/2 x 1
		3 x 3 x 1		
		3 x 3 x 1 1/4		

* List Prices

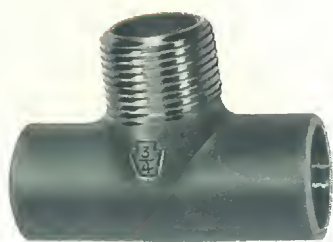
Nominal Sizes	500	501	502
1/4	\$.23	xx	xx
3/8	.23	\$.30	\$.30
1/2	.27	.40	.40
3/4	.49	.60	.60
1	.76	1.00	1.00
1 1/4	1.15	1.15	1.15
1 1/2	1.65	1.65	1.65
2	2.30	2.30	2.30
2 1/2	3.80	xx	xx
3	4.85	xx	xx
4	9.40	xx	xx

* Reducing Tees take price of largest dimension.
xx Not made in these sizes.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

CAST SOLDER FITTINGS



503—TEE

Copper to Copper to Male S.P.S.
3/8" to 2". Not made in reducing
sizes.



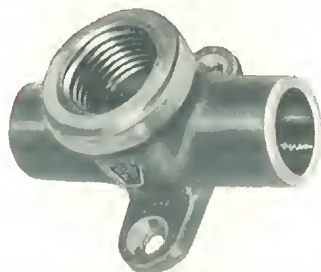
504—TEE

Copper to Male S.P.S. to Copper.
3/8" to 1". Not made in reducing
sizes.



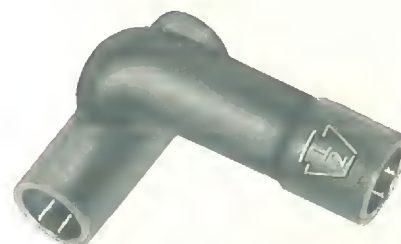
500DE—DROP EAR TEE

Copper to Copper to Copper.
3/8" to 3/4". Not made in reducing
sizes.



501DE—DROP EAR TEE

Copper to Copper to Female S.P.S.
3/8" to 3/4". One reducing size—
1/2 x 1/2 x 3/8



580—CROSSOVER TEE

Copper to Copper to Copper
1/2" only.



508—Y BRANCH 45°

Copper to Copper to Copper
1/2" to 1" (For larger sizes and
reducing sizes see 704-Y Branch,
page 16.)



**581—WASH TRAY OR
CROSSOVER TEE**

Copper to Copper to Female S.P.S.
1/2" only



570—CROSS

Copper to Copper to Copper to
Copper 1/4" to 2". Not made in
reducing sizes.

List Prices

Nominal Sizes	503	504	500 DE 501 DE	508	570	580 581
1/4	xx	xx	xx	xx	\$.38	xx
3/8	\$.30	\$.30	\$.45	xx	.38	xx
1/2	.40	.40	.60	\$.36	.46	\$.91
3/4	.60	.60	1.00	.65	.76	xx
1	1.00	1.00	xx	1.00	1.15	xx
1 1/4	1.15	xx	xx	★	1.80	xx
1 1/2	1.65	xx	xx	★	2.50	xx
2	2.30	xx	xx	★	3.35	xx

xx Not made in these sizes.

★ See item 704, page 16.



Copperflow



510—ELBOW 90°

Copper to Copper.

1/4" to 4". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/4	1 1/2 x 1 1/4
1/2 x 3/8	2 x 3/4
	2 x 1
3/4 x 1/2	2 x 1 1/4
1 x 1/2	2 x 1 1/2
1 x 3/4	
	2 1/2 x 1 1/2
1 1/4 x 1/2	2 1/2 x 2
1 1/4 x 3/4	
1 1/4 x 1	3 x 1 1/2
	3 x 2
1 1/2 x 1/2	3 x 2 1/2
1 1/2 x 3/4	
1 1/2 x 1	4 x 3



511—ELBOW 90°

Copper to Female S.P.S.

1/4" to 4". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/2	3/4 x 1
1/2 x 3/8	1 x 3/4
1/2 x 3/4	1 x 1 1/4
1/2 x 1	1 1/4 x 3/4
1/2 x 1 1/4	1 1/4 x 1
3/4 x 1/2	1 1/2 x 1 1/4



510DE—DROP EAR ELBOW 90°

Copper to Copper.

3/8" to 3/4". Not made in reducing sizes.



512—ELBOW 90°

Copper to Male S.P.S.

1/4" to 4". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/2	3/4 x 1 1/2
1/2 x 3/8	3/4 x 1
1/2 x 3/4	1 x 3/4



511DE—DROP EAR ELBOW 90°

Copper to Female S.P.S.

3/8" to 3/4". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/2
1/2 x 3/8



575—FLANGED ELBOW 90°

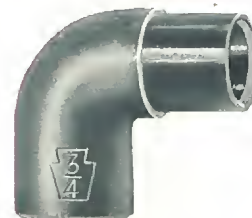
Copper to Female S.P.S.

1/2" only.

*List Prices

Nominal Sizes	510	510 DE	511	511 DE	512	513	575
1/4	\$.15	xx	\$.20	xx	xx	xx	xx
3/8	.15	\$.30	.20	xx	xx	xx	xx
1/2	.18	.40	.28	\$.55	xx	xx	xx
3/4	.30	.55	.40	xx	xx	xx	xx
1	.55	xx	.70	xx	xx	xx	xx
1 1/4	.84	xx	.84	xx	xx	xx	xx
1 1/2	1.15	xx	1.15	xx	xx	xx	xx
2	1.65	xx	1.65	xx	xx	xx	xx
2 1/2	3.05	xx	3.05	xx	xx	xx	xx
3	3.80	xx	3.80	xx	xx	xx	xx
4	6.40	xx	6.40	xx	xx	xx	xx

* Reducing sizes take price of larger dimension.
xx Not made in these sizes.



513—STREET ELBOW 90°

Copper to Fitting.

1/4" to 4". Not made in reducing sizes.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

CAST SOLDER FITTINGS



510U—UNION ELBOW 90°
Copper to Copper.
3/8" to 2". Not made in reducing
sizes.



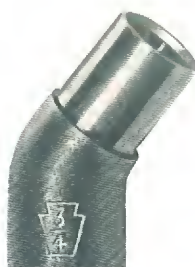
511U—UNION ELBOW 90°
Copper to Female S.P.S.
3/8" to 2". Not made in reducing
sizes.



512U—UNION ELBOW 90°
Copper to Male S.P.S.
3/8" to 2". Not made in reducing
sizes.



516—ELBOW 45°
Copper to Copper.
3/8" to 4". Not made in reducing
sizes.



517—STREET ELBOW 45°
Copper to Fitting.
3/8" to 4". Not made in reducing
sizes.



518—ELBOW 45°
Copper to Female S.P.S.
3/8" to 2". Not made in reducing
sizes.



518A—ELBOW 45°
Copper to Male S.P.S.
3/8" to 2". Not made in reducing
sizes.

List Prices

Nominal Sizes	Page 11				
	510U	511U 512U	516	517	518 518A
3/8	\$1.20	\$1.35	\$.15	.20	\$.20
1/2	1.35	1.60	.18	.28	.28
3/4	1.80	2.00	.30	.40	.40
1	2.45	2.75	.55	.70	.70
1 1/4	3.20	3.65	.84	.84	.84
1 1/2	4.55	5.00	1.15	1.15	1.15
2	5.95	6.85	1.65	1.65	1.65
2 1/2	xx	xx	3.05	3.05	xx
3	xx	xx	3.80	3.80	xx
4	xx	xx	6.40	6.40	xx

xx Not made in these sizes.

Copperflow



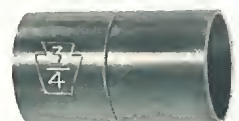
520—CAST COUPLING

Copper to Copper.

1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1/2 x 3/8	2 x 1/2
3/4 x 3/8	2 x 3/4
3/4 x 1/2	2 x 1
1 x 1/2	2 x 1 1/4
1 x 3/4	2 x 1 1/2
	2 1/2 x 1 1/2
1 1/4 x 1/2	2 1/2 x 2
1 1/4 x 3/4	3 x 1 1/4
1 1/4 x 1	3 x 1 1/2
1 1/2 x 1/2	3 x 2
1 1/2 x 3/4	3 x 2 1/2
1 1/2 x 1	4 x 2
1 1/2 x 1 1/4	4 x 3



920—WROUGHT COUPLING

Copper to Copper.

1/4" to 4". Not made in reducing sizes.



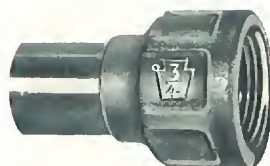
522—ADAPTER

Copper to Female S.P.S.

1/4" to 4". Reducing sizes as listed. 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/4	1 1/4 x 3/4
3/8 x 1/2	1 1/4 x 1
1/2 x 1/4	1 1/4 x 1 1/2
1/2 x 3/8	1 1/4 x 2
1/2 x 3/4	1 1/2 x 1
	1 1/2 x 1 1/4
3/4 x 1/2	1 1/2 x 2
3/4 x 1	2 x 1 1/4
1 x 1/2	2 x 1 1/2
1 x 3/4	2 x 3
1 x 1 1/4	3 x 4
1 x 1 1/2	



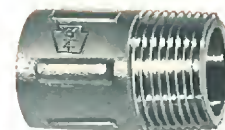
524—FITTING ADAPTER

Fitting to Female S.P.S.

1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1/2 x 3/4	3/4 x 1
3/4 x 1/2	1 x 1 1/4



523—ADAPTER

Copper to Male S.P.S.

Reducing Sizes

1/4 x 3/8	1 x 1 1/4
3/8 x 1/2	1 x 1 1/2
1/2 x 3/8	1 1/4 x 1
1/2 x 3/4	1 1/4 x 1 1/2
1/2 x 1	1 1/4 x 2
	1 1/2 x 1 1/4
3/4 x 1/2	1 1/2 x 2
3/4 x 1	2 x 1 1/4
3/4 x 1 1/4	2 x 1 1/2
1 x 1/2	2 x 3
1 x 3/4	3 x 4



525—FITTING ADAPTER

Fitting to Male S.P.S.

1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1/2 x 3/4	1 x 3/4
3/4 x 1/2	1 x 1 1/4
3/4 x 1	1 1/4 x 1



521—ECCENTRIC COUPLING

Copper to Copper.

Reducing sizes only.

Reducing Sizes

3/4 x 1/2	1 1/2 x 1
1 x 1/2	1 1/2 x 1 1/4
1 x 3/4	2 x 1
1 1/4 x 1/2	2 x 1 1/4
1 1/4 x 3/4	2 x 1 1/2
1 1/4 x 1	3 x 2
1 1/2 x 3/4	4 x 3



522DE—SILL COCK ADAPTER

Copper to Female S.P.S.

1/2" only.

*List Prices

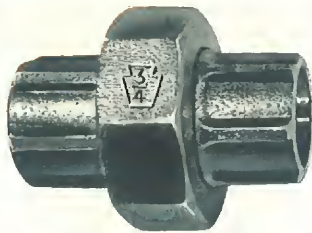
Nominal Sizes	520	521	522	523	524	525	522 DE	920
1/4	\$.15	xx	\$.18	xx	\$.09	xx	\$.09	
3/8	.15	xx	.18	xx	.09	xx	.09	
1/2	.18	xx	.20	\$.40	.12	xx	.12	
3/4	.27	\$.27	.30	xx	.18	xx	.18	
1	.46	.46	.55	xx	.24	xx	.24	
1 1/4	.76	.76	.76	xx	.30	xx	.30	
1 1/2	1.05	1.05	1.05	xx	.38	xx	.38	
2	1.50	1.50	1.50	xx	.68	xx	.68	
2 1/2	2.60	2.60	2.60	xx	1.00	xx	1.00	
3	3.40	3.40	3.40	xx	1.65	xx	1.65	
4	5.80	5.80	5.80	xx	2.95	xx	2.95	

* Reducing sizes take price of larger dimension.
xx Not made in these sizes.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

CAST SOLDER FITTINGS

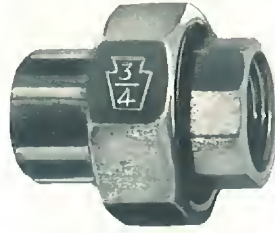


530-UNION

(Ground Joint)

Copper to Copper.

$\frac{3}{8}$ " to 2". Not made in reducing sizes.

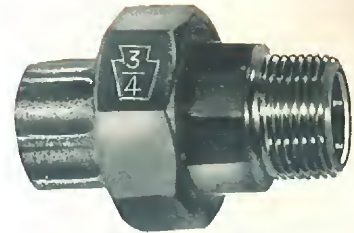


531-UNION

(Ground Joint)

Copper to Female S.P.S.

$\frac{3}{8}$ " to 2". Not made in reducing sizes.

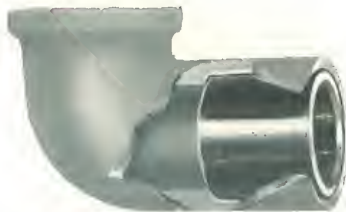


532-UNION

(Ground Joint)

Copper to Male S.P.S.

$\frac{3}{8}$ " to 2". Not made in reducing sizes.



535-FLUSH BUSHING

Fitting to Copper.

Sizes

$\frac{3}{8} \times \frac{1}{4}$

$\frac{3}{4} \times \frac{1}{2}$

$\frac{1}{2} \times \frac{1}{4}$

1 x $\frac{3}{4}$

$\frac{1}{2} \times \frac{3}{8}$



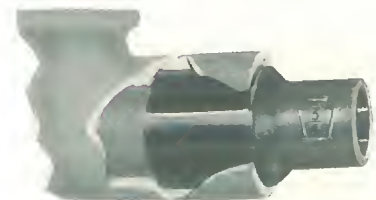
545-TUBE END CAP

$\frac{1}{4}$ " to 4".



540-FITTING PLUG

$\frac{1}{4}$ " to 4".



536-LONG BUSHING

Fitting to Copper.

Sizes

$\frac{3}{4} \times \frac{3}{8}$

1 x $\frac{3}{8}$

1 x $\frac{1}{2}$

$1\frac{1}{4} \times \frac{1}{2}$

$1\frac{1}{4} \times \frac{3}{4}$

$1\frac{1}{4} \times 1$

$1\frac{1}{2} \times \frac{1}{2}$

$1\frac{1}{2} \times \frac{3}{4}$

$1\frac{1}{2} \times 1$

$1\frac{1}{2} \times 1\frac{1}{4}$

2 x $\frac{1}{2}$

2 x $\frac{3}{4}$

2 x 1

2 x $1\frac{1}{4}$

2 x $1\frac{1}{2}$

$2\frac{1}{2} \times 1$

$2\frac{1}{2} \times 1\frac{1}{4}$

$2\frac{1}{2} \times 1\frac{1}{2}$

$2\frac{1}{2} \times 2$

3 x 1

3 x $1\frac{1}{4}$

3 x $1\frac{1}{2}$

3 x 2

3 x $2\frac{1}{2}$

4 x 1

4 x $1\frac{1}{4}$

4 x $1\frac{1}{2}$

4 x 2

4 x $2\frac{1}{2}$

4 x 3



585-CROSSOVER COUPLING

Copper to Copper.

$\frac{1}{2}$ " and $\frac{3}{4}$ ". Not made in reducing sizes.

*List Prices

Nominal Sizes	530	531 532	535	536	540 545	585
$\frac{1}{4}$	xx	xx	xx	xx	\$.09	xx
$\frac{3}{8}$	\$.76	\$1.05	\$.09	xx	.09	xx
$\frac{1}{2}$.91	1.30	.12	xx	.12	\$.61
$\frac{3}{4}$	1.30	1.50	.18	\$.27	.18	1.00
1	1.65	2.20	.24	.46	.24	xx
$1\frac{1}{4}$	2.30	3.50	xx	.76	.76	xx
$1\frac{1}{2}$	3.35	4.05	xx	1.05	1.05	xx
2	4.20	5.70	xx	1.50	1.50	xx
$2\frac{1}{2}$	xx	xx	xx	2.60	2.60	xx
3	xx	xx	xx	3.40	3.40	xx
4	xx	xx	xx	5.80	5.80	xx

* Reducing sizes take price of larger dimension.

xx Not made in these sizes.



Copperflow



583—COMPANION FLANGE

A. S. M. E. Drilling.
(Bolts not included)

Size	List Price
2	\$3.50
2½	5.45
3	7.30
4	10.35



550—ONE PIECE BOILER COUPLING

Copper to Male S.P.S. to Female
S.P.S.

Size	List Price
½ x 1 x ½	\$.53
¾ x 1 x ½	.53
¾ x 1 x ¾	.53



555—ONE PIECE BOILER ELBOW

Copper to Male S.P.S. to Female
S.P.S.

Size	List Price
½ x 1 x ½	\$.61
¾ x 1 x ½	.61
¾ x 1 x ¾	.61

TOOLS AND ACCESSORIES



588—COPPER HANGER STRAPPING

¾" wide

	List Price
25 ft. roll	\$ 2.25
50 ft. roll	4.50



595—COPPER TUBE STRAPS

Size	List Price Per M
⅜	\$42.60
½	47.10
¾	65.40
1	77.50
1¼	120.10
1½	139.80
2	176.30



589—KWIK-KLIP HANGER

Pat. No. 2,339,992

A pure copper perforated hanger strap with patented quick clip feature which fits ⅜" - ½" ¾" and 1" water tube. Overall length 10".

List Price \$18.00 per C



590—COPPERFLOW SOLDER PASTE

	List Price
2 oz. can	\$.23
1 lb. can	1.50



SOLDERS

Copperflow Solder. Especially developed for solder fittings. Economically priced yet equal in performance to 50-50 solder.

50-50. 50% tin, 50% lead. For working temperatures up to 250 F. All general plumbing and drainage. Steam up to 15 lbs.

95-5. 95% tin, 5% antimony. For working temperatures up to 315 F. Steam up to 65 lbs.

One lb. spools—⅛" dia. (11 Ga.)

Prices upon application.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

TOOLS AND ACCESSORIES



591—WOOD HANDLE FITTING BRUSH

All Keystone Cleaning Brushes are made from special tempered steel wire, accurately sized to give quick cleaning action. Packed 1 Doz. per box.

Size	List Price Each
3/8	\$.46
1/2	.46
3/4	.55
1	.55



597—ALUMINUM HANDLE

This Handle is used with all sizes of #596 Adapter Type Brushes. The round design of this handle and the ease of changing brushes make this a very practical cleaning tool. Packed 1 Doz. per box.

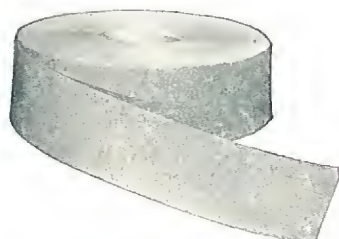
Handle Only	List Price	.42
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592—TUBE BRUSH

Fast acting. Assures clean tube surface of correct length. Packed 1/2 doz. per box.

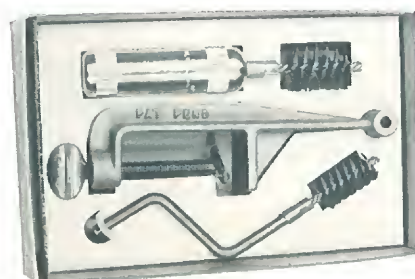
Size	List Price Each
3/8	\$.80
1/2	.95
3/4	1.10
1	1.25



593 SAND CLOTH

An abrasive cloth specially processed for cleaning copper tube and fittings.

25 yd. roll, 1 1/2" wide
List Price \$3.80



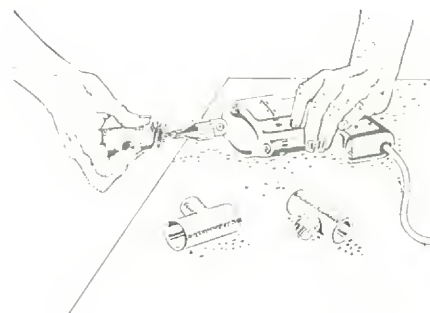
599—INTRODUCTORY KIT

Boxed kit includes
1—596 Brush 1/2"
1—596 Brush 3/4"
1—597 Aluminum Handle
1—598 Bracket and Crank
List Price \$2.75



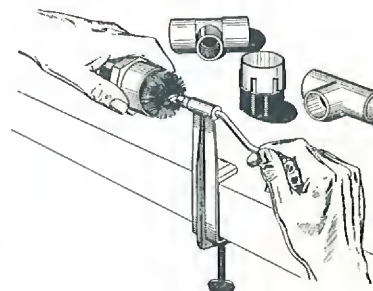
596—ADAPTER TYPE FITTING BRUSH

Brushes may be used with #597 Aluminum Handle—#598 Bracket and Crank Assembly—or on production jobs they work excellently in an electric hand drill.



Sizes
1/4" through 1"—1 Doz. per box.
1 1/2" through 2"—1/2 Doz. per box.

Size	List Price	Size	List Price
1/4"	.46	1"	.59
3/8"	.46	1 1/4"	.75
1/2"	.46	1 1/2"	.75
3/4"	.59	2"	.75



598—BRACKET AND CRANK ASSEMBLY

A low cost fixture which speeds cleaning of fittings. Individually packed.

List Price each \$1.57



Copperflow



700—SANITARY TEE

Copper to Copper to Copper.
1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/4 x 1 1/4	3 x 3 x 1 1/4
1 1/2 x 1 1/4 x 1 1/2	3 x 3 x 1 1/2
1 1/2 x 1 1/2 x 1 1/4	3 x 3 x 2
2 x 1 1/2 x 1 1/2	
2 x 1 1/2 x 2	4 x 4 x 1 1/2
2 x 2 x 1 1/4	4 x 4 x 2
2 x 2 x 1 1/2	4 x 4 x 3



704—Y BRANCH 45°

Copper to Copper to Copper.
1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/4 x 1 1/2	3 x 3 x 1 1/2
1 1/2 x 1 1/2 x 1 1/4	3 x 3 x 2
2 x 1 1/2 x 1 1/2	4 x 4 x 1 1/4
2 x 2 x 1 1/4	4 x 4 x 1 1/2
2 x 2 x 1 1/2	4 x 4 x 2
3 x 3 x 1 1/4	4 x 4 x 3



703—SANITARY TEE

Copper to Copper to Female S.P.S.
1 1/4" to 2". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/2 x 1 1/4	2 x 2 x 1 1/2
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* List Prices

Nominal Sizes	700	703	700 M	700 S
	704	707	706 M	706 S
1 1/4	\$1.15	\$1.15	\$1.65	
1 1/2	1.65	1.65	2.40	
2	2.30	2.30	3.35	
3	4.85	xx	xx	
4	9.40	xx	xx	

* Reducing sizes take price of largest dimension.
xx Not made in these sizes.



706—SANITARY TEE

Copper to Female S.P.S. to Copper.
1 1/4" to 2". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/2 x 1 1/4	2 x 2 x 1 1/2
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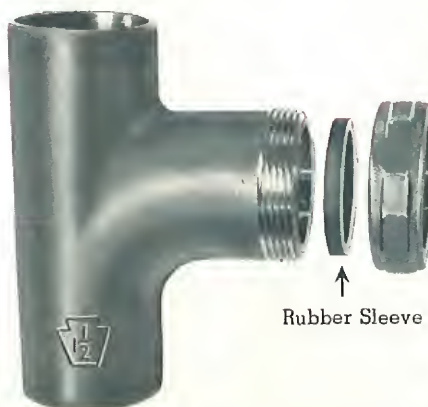


707—SANITARY TEE

Copper to Female to Female S.P.S.
1 1/4" to 2". Reducing sizes as listed.

Reducing Sizes

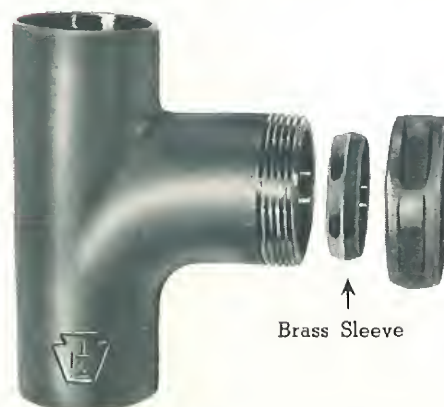
1 1/2 x 1 1/4 x 1 1/4	2 x 2 x 1 1/2
1 1/2 x 1 1/2 x 1 1/4	



700S—SANITARY TEE WITH SLIP CONNECTION

Note: Sanitary tees 700 and 706 may be furnished with Slip or Marvel connections in the following sizes only:

1 1/4 x 1 1/4 x 1 1/4	1 1/2 x 1 1/2 x 1 1/4	1 1/2 x 1 1/2 x 1 1/2	2 x 2 x 1 1/2
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700M—SANITARY TEE WITH MARVEL CONNECTION

Brass Sleeve

Rubber Sleeve

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

SOLDER DRAINAGE FITTINGS



746—Y BRANCH 45°

Copper to Copper to Female S.P.S.
1 1/4" to 2". Not made in
reducing sizes.

747—Y BRANCH 45°

Copper to Female S.P.S. to Copper.
(Not illustrated) 1 1/4" to 2". Not
made in reducing sizes.



708—LONG TURN TY

Copper to Copper to Copper.
1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/2 x 1 1/4	3 x 3 x 1 1/2
2 x 1 1/2 x 2	3 x 3 x 2
2 x 2 x 1 1/4	4 x 4 x 1 1/2
2 x 2 x 1 1/2	4 x 4 x 2
3 x 3 x 1 1/4	4 x 4 x 3



748—LONG TURN TY

Copper to Copper to Female S.P.S.
1 1/4" to 2". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/2 x 1 1/4	2 x 2 x 1 1/2
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701—DOUBLE SANITARY TEE

Copper to Copper to Copper to
Copper.

1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/2 x 1 1/4 x 1 1/4
2 x 2 x 1 1/4 x 1 1/4
2 x 2 x 1 1/2 x 1 1/2
3 x 3 x 1 1/2 x 1 1/2
3 x 3 x 2 x 2
4 x 4 x 2 x 2
4 x 4 x 3 x 3



705—DOUBLE Y BRANCH 45°

Copper to Copper to Copper to
Copper.

1 1/4" to 4". Reducing sizes same as
701.



**745L— SANITARY TEE
WITH SIDE INLET**

Copper to Copper to Copper to
Copper.

With side inlet at left.

One size only.

3 x 3 x 3 x 1 1/2

745R—Same as above with side
inlet at right.

*List Prices

Nominal Sizes	701			745L	746	
	705	708	709	745R	747	748
1¼	\$2.15	\$1.90	\$3.20	xx	\$1.15	\$1.90
1½	3.10	2.65	3.95	xx	1.65	2.65
2	4.70	4.35	6.30	xx	2.30	4.35
3	9.40	8.50	12.75	\$9.40	xx	xx
4	15.05	12.75	19.75	xx	xx	xx

* Reducing sizes take price of largest dimension.
xx Not made in these sizes.



**709—LONG
TURN DOUBLE**

TY Copper to Copper
to Copper to Copper.
1 1/4" to 4". Reducing
sizes same as 701.



Copperflow



710—DRAINAGE ELBOW 90°
(1/4 BEND)

Copper to Copper. 1 1/4" to 4".
Not made in reducing sizes.



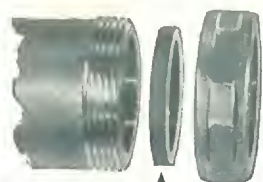
711—DRAINAGE ELBOW 90°
(1/4 BEND)

Copper to Female S.P.S. 1 1/4" to 2".
Not made in reducing sizes.



712—DRAINAGE ELBOW 90°
(1/4 BEND)

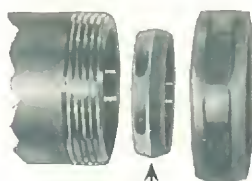
Copper to Male S.P.S. 1 1/4" to 2".
Not made in reducing sizes.



Rubber Sleeve

710S—DRAINAGE ELBOW 90°
WITH SLIP CONNECTION
(1/4 BEND)

1 1/4" and 1 1/2" only.



Brass Sleeve

710M—DRAINAGE ELBOW 90°
WITH MARVEL CONNECTION
(1/4 BEND)

1 1/4" and 1 1/2" only.



715—DRAINAGE ELBOW 60°
(1/6 BEND)

Copper to Copper. 1 1/4" to 4".
Not made in reducing sizes.



716—DRAINAGE ELBOW 45°
(1/8 BEND)

Copper to Copper. 1 1/4" to 4".
Not made in reducing sizes.



717—DRAINAGE ELBOW 22 1/2°
(1/16 BEND)

Copper to Copper. 1 1/4" to 4".
Not made in reducing sizes.



718—DRAINAGE ELBOW 11 1/4°
(1/32 BEND)

Copper to Copper. 1 1/4" to 4".
Not made in reducing sizes.

List Prices

Nominal Sizes	710-715	711 712	710M 710S
	716-717 718		
1 1/4	\$.84	\$.84	\$1.34
1 1/2	1.15	1.15	1.90
2	1.65	1.65	xx
3	3.80	xx	xx
4	6.40	xx	xx

xx Not made in these sizes.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

SOLDER DRAINAGE FITTINGS

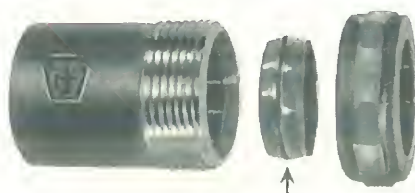


720—COUPLING

Copper to Copper.
1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/2 x 1 1/4	3 x 1 1/2
2 x 1 1/4	3 x 2
2 x 1 1/2	4 x 2
3 x 1 1/4	4 x 3



Brass Sleeve

720M—MARVEL COUPLING

Copper to Marvel Connection.

Reducing Sizes

1 1/4 C x 1 1/4 O. D.
1 1/2 C x 1 1/4 O. D.
1 1/2 C x 1 3/8 O. D.
1 1/2 C x 1 1/2 O. D.

720S—SLIP COUPLING

Copper to Slip Connection.
Same as above with rubber sleeve.
Sizes same as 720M.



722—ADAPTER

Copper to Female S.P.S.
1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/4 x 1 1/2	2 x 1 1/4
1 1/4 x 2	2 x 1 1/2
1 1/2 x 1 1/4	2 x 3
1 1/2 x 2	3 x 4



736—LONG BUSHING

Fitting to Copper.

Reducing Sizes

1 1/2 x 1 1/4	3 x 1 1/2
2 x 1 1/4	3 x 2
2 x 1 1/2	4 x 2
3 x 1 1/4	4 x 3

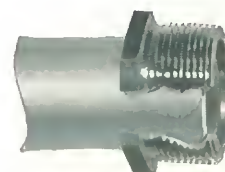


723—ADAPTER

Copper to Male S.P.S.
1 1/4" to 4". Reducing sizes as listed.

Reducing Sizes

1 1/4 x 1 1/2	2 x 1 1/4
1 1/4 x 2	2 x 1 1/2
1 1/2 x 1 1/4	2 x 3
1 1/2 x 2	3 x 4



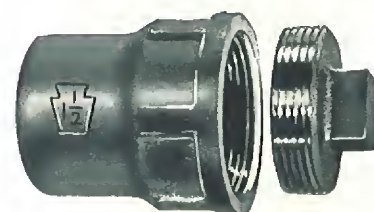
724—FLUSH MALE ADAPTER

Copper to Male S.P.S.
1 1/4", 1 1/2" and 2". Not made in reducing sizes.



741—CLEANOUT (With Plug)

For Fitting 1 1/4" to 4".
Not Made in Reducing Sizes.



742—CLEANOUT (With Plug)

For Tube 1 1/4" to 4".
Not Made in Reducing Sizes.



744—CLEANOUT PLUG

1 1/4" to 4" S. P. S.

*List Prices

Noninal Sizes	720-722	723-736	724	741	742	744	720M 720S
1 1/4	\$.76		\$.50	\$1.20		\$.50	\$1.11
1 1/2	1.05		.65	1.60		.60	1.51
2	1.50		.90	2.00		.80	xx
3	3.40		xx	3.90		1.25	xx
4	5.80		xx	7.00		2.00	xx

* Reducing sizes take price of larger dimension.
xx Not made in these sizes.



Copperflow



749—ADJUSTABLE CLOSET BEND AND FLANGE

Combination List Price — \$9.75
Height adjustment is made by use of short piece of 4" tube (not furnished) between flange and 4" x 3" super sanitary closet ell.



750—CLOSET BEND AND FLANGE

3" x 3" Combination List Price — \$8.35
4" x 4" Combination List Price — \$10.95



751—FLANGE ONLY
for 3" Elbow List Price — \$3.35
for 4" Elbow List Price — \$3.35



730—SOIL PIPE FERRULE Copper to Soil Pipe

Size	List Price
1 1/4 x 2	\$1.50
1 1/2 x 2	1.50
2 x 2	1.50
1 1/2 x 3	3.40
2 x 3	3.40
3 x 3	3.40
3 x 4	5.80
4 x 4	5.80



755C—P TRAP
with Cleanout. Rough brass.
1 1/2" only
List Price — \$5.70

755 — Same as above
without Cleanout.
List Price — \$5.70



756C—S TRAP
with Cleanout. Rough Brass.
1 1/2" only
List Price — \$6.60

756 — Same as above
without Cleanout
List Price — \$6.60

760—DRUM TRAP

Rough brass finish
4" x 5"
1 1/2" copper outlet
Female S.P.S. inlet
Cleanout cover
and gasket included.
List Price — \$7.00



* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

FLARED TUBE FITTINGS

All Flared fittings are shown with standard nuts. Fittings with long pattern nuts, (221 UG) can be supplied when required by code or specifications for underground service. Note special discount.



100—TEE

Copper to Copper to Copper
1/4" to 2".

Reducing sizes as listed.

Reducing Sizes

1/2 x 1/2 x 3/8	1 x 3/4 x 3/4
1/2 x 1/2 x 3/4	1 x 3/4 x 1
3/4 x 1/2 x 1/2	1 x 1 x 1/2
3/4 x 1/2 x 3/4	1 x 1 x 3/4
3/4 x 3/4 x 1/2	



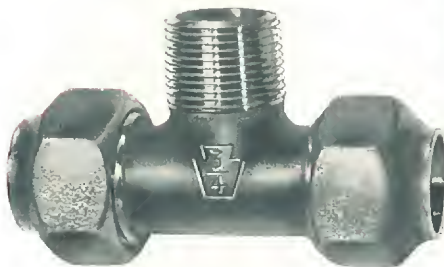
101—TEE

Copper to Copper to Female S.P.S.
1/4" to 2".

Reducing sizes as listed.

Reducing Sizes

1/2 x 1/2 x 3/8
3/4 x 3/4 x 1/2
1 x 1 x 3/4



103—TEE

Copper to Copper to Male S.P.S.
1/4" to 2".

Not made in reducing sizes.



102—TEE

Copper to Female S.P.S. to
Copper 1/4" to 2".

Not made in reducing sizes.



104—TEE

Copper to Male S.P.S. to Copper.
1/4" to 2".

Not made in reducing sizes.



140—ADAPTER

Copper to Female S.P.S.
1/4" to 2". Reducing sizes as listed.

Reducing Sizes

1/4 x 3/8	1/2 x 1
1/4 x 1/2	3/4 x 1/2
3/8 x 1/4	3/4 x 1
3/8 x 1/2	1 x 3/4
1/2 x 3/8	1 x 1 1/4
1/2 x 3/4	1 1/4 x 1



150—ADAPTER

Copper to Male S.P.S.
1/4" to 2". Reducing sizes as listed.

Reducing Sizes

1/4 x 3/8	1/2 x 1
1/4 x 1/2	3/4 x 1/2
3/8 x 1/4	3/4 x 1
3/8 x 1/2	1 x 3/4
1/2 x 3/8	1 x 1 1/4
1/2 x 3/4	1 1/4 x 1

*List Prices

Nominal Sizes	100-101	102-103	104	150
1/4	\$.70			\$.32
3/8	.70			.35
1/2	1.00			.45
3/4	1.35			.60
1	2.45			1.15
1 1/4	4.20			1.80
1 1/2	6.40			2.65
2	9.90			4.10

* Reducing sizes take price of larger dimension.

Copperflow



110—ELBOW 90°

Copper to Copper.

1/4" to 2". Reducing sizes as listed.

Reducing Sizes

1/2 x 3/8	1 x 3/4
3/4 x 1/2	1 1/4 x 1



120—ELBOW 90°

Copper to Female S.P.S.

1/4" to 2". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/2	3/4 x 1
1/2 x 3/8	1 x 3/4
1/2 x 3/4	1 x 1 1/4
3/4 x 1/2	1 1/4 x 1



130—ELBOW 90°

Copper to Male S.P.S.

1/4" to 2". Reducing sizes as listed.

Reducing Sizes

3/8 x 1/2	3/4 x 1
1/2 x 3/8	1 x 3/4
1/2 x 3/4	1 x 1 1/4
3/4 x 1/2	1 1/4 x 1



135—ELBOW 45°

Copper to Copper.

3/8" to 2".

Not made in reducing sizes.



136—ELBOW 45°

Copper to Female S.P.S.

3/8" to 2".

Not made in reducing sizes.



137—ELBOW 45°

Copper to Male S.P.S.

3/8" to 2".

Not made in reducing sizes.

*List Prices

Nominal Sizes	110 120 130	135 136 137	110 DE 120 DE
1/4	\$.45	xx	xx
3/8	.50	.50	\$.75
1/2	.60	\$.60	1.00
3/4	1.00	1.00	1.50
1	1.50	1.50	2.65
1 1/4	2.45	2.45	xx
1 1/2	3.80	3.80	xx
2	6.10	6.10	xx

* Reducing sizes take price of larger dimension.
xx Not made in these sizes.



110DE—DROP EAR ELBOW 90°

Copper to Copper

3/8" to 1"

Not made in reducing sizes.



120DE—DROP EAR ELBOW 90°

Copper to Female S.P.S.

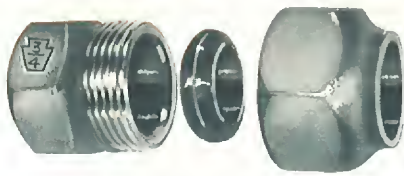
3/8" to 1".

Not made in reducing sizes.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

FLARED TUBE FITTINGS



190—UNION (With Ring)
Copper to Copper.
3/8" to 2".
Not made in reducing sizes.



190A—UNION (3 piece)
Copper to Copper.
1/4" to 2".
Not made in reducing sizes.



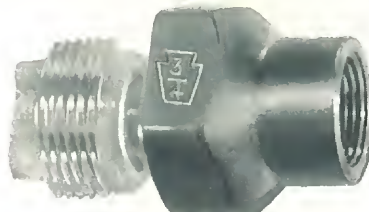
220—FITTING NUTS
All flared fittings are furnished complete with nuts. Above number is for extra nuts only.



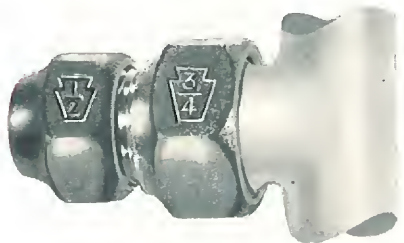
221UG—LONG PATTERN UNDERGROUND NUT
When fittings with long pattern nuts are required by code or specifications for underground service, specify the regular catalog number of fitting with "Long Pattern 221UG." Note special discount.



160—NUT WITH MALE PIPE THREAD
Fitting to Male S.P.S. 3/8" to 2".
Not made in reducing sizes.



170—NUT WITH FEMALE PIPE THREAD
Fitting to Female S.P.S. 3/8" to 2".
Not made in reducing sizes.



180—FITTING REDUCER
Fitting to Copper.
Screws on flared end of fitting to reduce fitting size. (Note: This is not an Iron Pipe Adapter.)

Sizes	
1/2 x 3/8	1 1/4 x 3/4
3/4 x 3/8	1 1/4 x 1
3/4 x 1/2	1 1/2 x 1 1/4
1 x 1/2	2 x 1 1/4
1 x 3/4	2 x 1 1/2
1 1/4 x 1/2	



145—COMPRESSION OIL TANK FITTING
1/4" to 1/2".
As illustrated, tubing slips through fitting to bottom of tank. Sizes listed are for O.D. oil burner tubing.



210—FLANGING TOOL
For copper tubing. 1/4" to 2".



224 — TUBE END CAP
1/4" to 2".



223—FITTING CAP WASHER
This soft copper washer is used with standard nut to seal off flared end of fitting. 1/4" to 2".

*List Prices

Nominal Sizes	145	160	170	180	190	190 A	210	220	221UG	223 (Per C)	224
1/4	\$.55	xx	xx	xx	xx	\$.45	\$.45	\$.12	\$7.00		\$.24
3/8	.70	\$.23	xx	xx	\$.35	.50	.45	.12	8.00		.27
1/2	1.05	.30	\$.55	.45	.60	.60	.55	.15	9.00		.30
3/4	xx	.40	.70	.60	1.00	.70	.20	10.66	.50		
1	xx	.60	1.20	1.15	1.50	1.30	.40	12.33	.75		
1 1/4	xx	1.05	2.15	1.80	2.45	2.70	.60	14.33	1.50		
1 1/2	xx	1.50	3.05	2.65	3.80	4.50	.90	16.33	2.05		
2	xx	2.80	4.10	4.10	6.10	6.40	1.50	18.33	3.80		

* Reducing sizes take price of larger dimension.
xx Not made in these sizes.



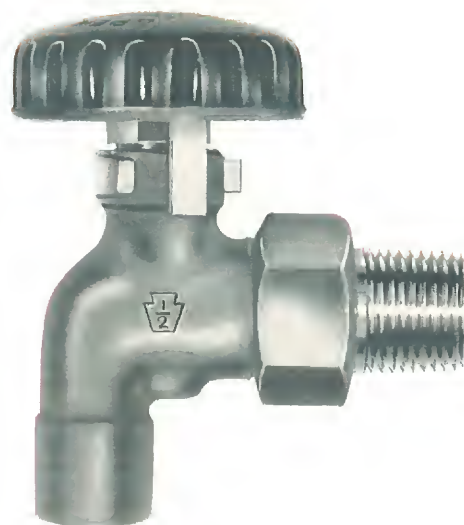
Copperflow

KEYSTONE BALANCING VALVES AND FITTINGS

The increasing use of circulators on hot water heating systems led to the development of KEYSTONE Balancing Valves so that these systems could be properly balanced. Ordinary hot water valves cannot be used as they allow too much flow even when the valve is in a closed position. KEYSTONE Balancing Valves permit complete control of flow and in closed position allow only enough flow to prevent freezing.

Elbow and straight type valves (except 654 and 655) have union connections. They are made in a compact design which permits their easy installation even in the limited spaces provided by recessed radiation or convector installations. *Note illustrations at right which show designs of a vertical and a horizontal control.* Both are available with either solder or threaded connections in either the screw driver or wheel handle type stem.

The flow is adjusted to any desired amount simply by turning the stem with a screw driver, or a wheel handle type valve (as illustrated) can be furnished if desired.



**650WH—WHEEL HANDLE
BALANCING ELBOW**

Wheel handle type as shown is available in place of screw driver type on all KEYSTONE Balancing Valves. To specify, add "WH" to regular catalog number.



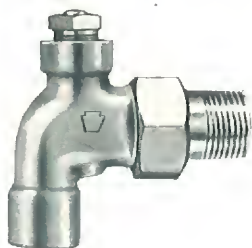
**650HCWH—HORIZONTAL CONTROL
WHEEL HANDLE BALANCING ELBOW**

The Horizontal Control Elbow shown above is an original KEYSTONE design which permits greater operating convenience in many close-quarter installations. Available in either screw driver or wheel handle type on Balancing Elbows 650 or 651.

To specify horizontal control screw driver type add "HC" to catalog number.

To specify horizontal control wheel handle type add "HCWH" to catalog number.

BALANCING VALVES AND FITTINGS



650—BALANCING ELBOW

Copper to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



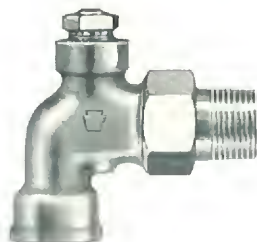
652—BALANCING UNION

Copper to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



660—UNION ELBOW

Copper to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



651—BALANCING ELBOW

Female to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



653—BALANCING UNION

Female S.P.S. to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



661—UNION ELBOW

Female S.P.S. to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



654—FLOW CONTROL VALVE

Copper to Copper.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "

A balancing valve without union for radiant heating lines. Furnished in rough brass.



662—UNION

Copper to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "

Reducing Sizes
 $\frac{1}{2} \times \frac{3}{4}$



663—UNION

Female S.P.S. to Male S.P.S. Union.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "



655—FLOW CONTROL VALVE

Female S.P.S. to Female S.P.S.
Sizes $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ "

A balancing valve without union for radiant heating lines. Furnished in rough brass.

All balancing elbows and unions shown above are arranged for screw driver control. Each can be furnished with wheel handle when required.

For wheel handle type valves and horizontal control valves see page 24 for information on ordering.

*List Prices

	650	650WH		
	651	651WH		
	652	652WH		660
	653	653WH		661
Nominal	650HC	650HCWH	654	662
Sizes	651HC	651HCWH	655	663
$\frac{3}{8}$	\$1.85	\$2.35	\$1.45	\$1.25
$\frac{1}{2}$	1.85	2.35	1.45	1.25
$\frac{3}{4}$	2.30	2.80	1.65	1.50

* Reducing sizes take price of larger dimension.



Copperflow



560—STOP AND WASTE VALVE

Solder type. Copper to Copper.
Sizes $\frac{3}{8}$ " to 1"

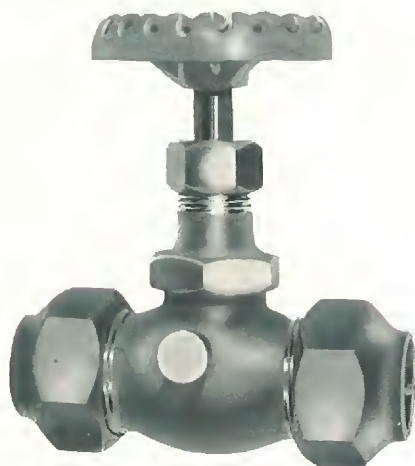
KEYSTONE COPPERFLOW VALVES

KEYSTONE Copperflow Valves are cast from high-specification valve bronze with ample weight and wall thickness. Fitting ends are machined to close tolerances to insure perfect solder or flared tube connections. Threads on both stem and bonnet are accurately machined for smooth operation, long life and positive seating. Fully inspected and thoroughly tested under pressure.



565—STOP VALVE

Solder Type. Copper to Copper.
Sizes $\frac{3}{8}$ " to 1"



175—STOP AND WASTE VALVE

Flared type. Copper to Copper.
Sizes $\frac{3}{8}$ " to $\frac{3}{4}$ "



176—STOP VALVE

Flared type. Copper to Copper.
Sizes $\frac{3}{8}$ " to $\frac{3}{4}$ "



566—GATE VALVE

Solder type. Copper to Copper.
125# S.W.P. Double disc. Rising stem. For steam, water and oil.
Sizes $\frac{1}{2}$ " to 2"

568—GATE VALVE

(Not Illustrated)
Same as above except
100# S.W.P. Sizes $\frac{1}{2}$ " to 2"

List Prices

Nominal Sizes	175	176	560	565	566	568
$\frac{3}{8}$	\$2.40	\$2.30	\$1.60	\$1.55	xx	xx
$\frac{1}{2}$	2.40	2.30	1.60	1.55	\$ 5.00	\$ 3.05
$\frac{3}{4}$	2.60	2.55	1.75	1.70	5.90	4.00
1	xx	xx	3.80	3.75	7.00	5.75
$1\frac{1}{4}$	xx	xx	xx	xx	9.40	8.15
$1\frac{1}{2}$	xx	xx	xx	xx	12.00	10.40
2	xx	xx	xx	xx	17.00	14.70

xx Not made in these sizes.

* Specify catalog number, nominal size, reducing dimensions and male or female ends.

For explanation and engineering information see pages 6 and 7.

CONSOLIDATED PRICE LIST

CAST SOLDER FITTINGS Cat. Nos. 500 to 585 — Also 920

ITEM	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Tees 500	.23	.23	.27	.49	.76	1.15	1.65	2.30	3.80	4.85	9.40
500DE		.45	.60	1.00		1.15	1.65	2.30			
501-502-503		.30	.40	.60	1.00						
501DE		.45	.60	1.00							
504		.30	.40	.60	1.00						
508			.36	.65	1.00						
Elbows 510-516	.15	.15	.18	.30	.55	.84	1.15	1.65	3.05	3.80	6.40
510DE-511DE		.30	.40	.55							
510U		1.20	1.35	1.80	2.45	3.20	4.55	5.95			
511U-512U		1.35	1.60	2.00	2.75	3.65	5.00	6.85			
511-512-513-517	.20	.20	.28	.40	.70	.84	1.15	1.65	3.05	3.80	6.40
518-518A		.20	.28	.40	.70	.84	1.15	1.65			
Couplings & Adapters 520-521	.15	.15	.18	.27	.46	.76	1.05	1.50	2.60	3.40	5.80
522-523-524-525	.18	.18	.20	.30	.55	.76	1.05	1.50	2.60	3.40	5.80
522DE			.40								
Unions 530		.76	.91	1.30	1.65	2.30	3.35	4.20			
531-532		1.05	1.30	1.50	2.20	3.50	4.05	5.70			
Bushings (Flush) 535		.09	.12	.18	.24						
Bushings (Long) 536				.27	.46	.76	1.05	1.50	2.60	3.40	5.80
Plugs-Caps 540-545	.09	.09	.12	.18	.24	.76	1.05	1.50	2.60	3.40	5.80
Boiler Coup. 550					.53						
Boiler Elbow 555					.61						
Cross 570	.38	.38	.46	.76	1.15	1.80	2.50	3.35			
Flanged Elbow 575			.55								
Crossover T's 580-581			.91								
Companion Flange 583											
Crossover Coup. 585			.61	1.00							
Wrot Coup. 920	.09	.09	.12	.18	.24	.30	.38	.68	1.00	1.65	2.95

FLARED FITTINGS Cat. Nos. 100 to 224

ITEM	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Tees 100-101-102-103-104	.70	.70	1.00	1.35	2.45	4.20	6.40	9.90
Elbows 110-120-130	.45	.50	.60	1.00	1.50	2.45	3.80	6.10
110DE-120DE		.75	1.00	1.50	2.65			
135-136-137		.50	.60	1.00	1.50	2.45	3.80	6.10
Adapters 140	.32	.35	.45	.60	1.15	1.80	2.65	4.10
150	.32	.35	.45	.60	1.15	1.80	2.65	4.10
160-170		.23	.30	.40	.60	1.05	1.50	2.80
Reducer 180			.55	.70	1.20	2.15	3.05	4.10
Unions 190		.35	.45	.60	1.15	1.80	2.65	4.10
190A	.45	.50	.60	1.00	1.50	2.45	3.80	6.10
Oil Tank Fitting 145	.55	.70	1.05					
Flanging Tool 210	.45	.45	.55	.70	1.30	2.70	4.50	6.40
Nut 220-221UG	.12	.12	.15	.20	.40	.60	.90	1.50
Fitting Cap 223 (Per C)	7.00	8.00	9.00	10.66	12.33	14.33	16.33	18.33
Tube Cap 224	.24	.27	.30	.50	.75	1.50	2.05	3.80

SOLDER AND FLARED VALVES Cat. Nos. 175 to 568

ITEM	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Flared S & W 175	2.40	2.40	2.60				
Flared Stop 176	2.30	2.30	2.55				
Solder S & W 560	1.60	1.60	1.75	3.80			
Solder Stop 565	1.55	1.55	1.70	3.75			
Solder Gate 566 — 125 lb.		5.00	5.90	7.00	9.40	12.00	17.00
Solder Gate 568 — 100 lb.		3.05	4.00	5.75	8.15	10.40	14.70

TOOLS AND ACCESSORIES Cat. Nos. 588 to 599

ITEM	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Strapping 588	25 ft. Roll — \$2.25 50 ft. Roll — \$4.50							
Hanger 589	\$18.00 — Per C							
Solder Paste 590	2 oz. — \$.23 1 lb. — \$1.50							
Brush 591		.46	.46	.55	.55			
Brush 592		.80	.95	1.10	1.25			
Sand Cloth 593	25 yd. Roll — \$3.80							
Solders	Price on Application							
Tube Straps 595 (Per M)		42.60	47.10	65.40	77.50	120.10	139.80	176.30
Brush 596	.46	.46	.46	.59	.59	.75	.75	.75
Handle 597	.42							
Crank Assembly 598	1.57							
Cleaning Kit 599	Kit \$2.75							

DRAINAGE FITTINGS Cat. Nos. 700 to 760

ITEM	1 1/4"	1 1/2"	2"	3"	4"
Tees Y's & TY's 700	1.15	1.65	2.30	4.85	9.40
700M-700S	1.65	2.40	3.35		
701	2.15	3.10	4.70	9.40	15.05
703	1.15	1.65	2.30		
704	1.15	1.65	2.30	4.85	9.40
705	2.15	3.10	4.70	9.40	15.05
706-707	1.15	1.65	2.30		
706M-706S	1.65	2.40	3.35		
708	1.90	2.65	4.35	8.50	12.75
709	3.20	3.95	6.30	12.75	19.75
746-747	1.15	1.65	2.30		
748	1.90	2.65	4.35		
Elbows 710	.84	1.15	1.65	3.80	6.40
710M-710S	1.34	1.90			
711-712	.84	1.15	1.65		
715-716-717-718	.84	1.15	1.65	3.80	6.40
Couplings 720	.76	1.05	1.50	3.40	5.80
720M-720S	1.11	1.51			
Adapters 722-723	.76	1.05	1.50	3.40	5.80
724	.50	.65	.90		
Ferrules 730			1.50	3.40	5.80
Bushings 736	.76	1.05	1.50	3.40	5.80
Cleanouts 741-742	1.20	1.60	2.00	3.90	7.00
Plugs 744	.50	.60	.80	1.25	2.00
Side Outlet Tee 745L-745R				9.40	
Closet Bends 749					9.75
Closet Bends 750				8.35	10.95
Closet Flange 751				3.35	3.35
P-Trap 755-755C		5.70			
S-Trap 756-756C		6.60			
Drum Trap 760					7.00

BALANCING ELBOWS, UNIONS AND FITTINGS Cat. Nos. 650 to 663

ITEM	3/8"	1/2"	3/4"
650-650HC	1.85	1.85	2.30
650WH-650HCWH	2.35	2.35	2.80
651-651HC	1.85	1.85	2.30
651WH-651HCWH	2.35	2.35	2.80
652-653	1.85	1.85	2.30
652WH-653WH	2.35	2.35	2.80
654-655	1.45	1.45	1.65
660-661-662-663	1.25	1.25	1.50

All sizes listed are **NOMINAL** sizes. For explanation and engineering information see pages 6 and 7.


REDUCING SIZES take price of largest dimension.

LIST PRICES are shown throughout. Discounts, terms and conditions are shown on current Discount Sheets.

PACKAGING: Wherever practical, all fittings are packaged in strong, multi-walled paper bags, clearly marked with contents. **STANDARD PACKAGING IS IN MULTIPLES OF 25 PIECES.**

ALL VALVES are boxed in convenient quantities, clearly labeled for shelf stock.

Complete printed sets of **ROUGHING-IN DIMENSIONS** for all Keystone fittings and valves are available for architects, engineers and contractors upon request.



In commercial, industrial or institutional buildings, in private homes or in critical machinery . . . wherever the need is for dependable efficiency and long-range economy . . . COPPERFLOW fittings meet the need.

As a pioneer of more than twenty years in this field, Keystone finds honest pride in thousands of coast-to-coast installations like these illustrated. We are proud, too, of the loyalty and confidence which we have received through the years from those who specify, sell and install Keystone COPPERFLOW fittings and valves.

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